CLAIMS

1. A method for manufacturing a screen cylinder, in which method screen wires (2) are set at predefined intervals side by side and fastened in the axial direction of the screen cylinder (1) to form a cylindrical screen surface in connection with ring-shaped support rods (3), and in which method end rings (5) are further mounted at the ends of the screen cylinder (1), **characterized** by installing at least one end ring (5) of the screen cylinder (1) at one end of the screen cylinder (1) in such a manner that the end ring (5) is arranged to at least one support rod (3) at the ends of the screen wires (2) or closest to the ends of the screen wires (3) and by forming a shrink fit between the end ring (5) and support rod (3), in which a substantially perpendicular force to the axis of the screen cylinder (1) acts between the end ring (5) and support rod (3), and the force, through the support rod (3), locks the screen surface formed by the screen wires (2) substantially immobile in relation to the end ring (5).

2. A method as claimed in claim 1, **characterized** in that the screen wires (2) are fastened to form a cylindrical screen surface inside the ring-shaped support rods (3) and that the inner circumference (6) or a part (6') of the inner circumference of the end ring (5) is arranged to at least one support rod (3) at the ends of the screen wires (2) or closest to the ends of the screen wires (3) outside the support rod (3), and a shrink fit is formed between the end ring (5) and the support rod (3), in which a substantially perpendicular force to the axis of the screen cylinder (1) acts between the end ring (5) and support rod (3), and the force is directed from the direction of the support rod (3) to the direction of the end ring (5) and/or from the direction of the end ring (5) to the direction of the support rod (3), and the force, through the support rod (3), locks the screen surface formed by the screen wires (2) substantially immobile in relation to the end ring (5).

3. A method as claimed in claim 1, **characterized** in that the screen wires (2) are fastened to form a cylindrical screen surface outside the ring-shaped support rods (3) and that the outer circumference (8) or part (8') of the outer circumference (8) of the end ring (5) is arranged to at least one support rod (3) at the ends of the screen wires (2) or closest to the ends of the screen wires (3) inside the support rod (3), and a shrink fit is formed between the end ring (5) and the support rod (3), in which a substantially perpendicular

force to the axis of the screen cylinder (1) acts between the end ring (5) and support rod (3), and the force is directed from the direction of the support rod (3) to the direction of the end ring (5), and the force, through the support rod (3), locks the screen surface formed by the screen wires (2) substantially immobile in relation to the end ring (5).

4. A method for manufacturing a screen cylinder, in which method screen wires (2) are set at predefined intervals side by side and fastened to support rods (3) which are bent in the shape of a ring so that the screen wires (2) form a cylindrical screen surface in the axial direction of the screen cylinder (1), and in which method end rings (5) of the screen cylinder (1) are mounted at the ends of the screen cylinder (1), **characterized** in that at least one end ring (5) of the screen cylinder (1) is installed at one end of the screen cylinder (1) in such a manner that the end ring (5) is arranged to at least one support rod (3) at the ends of the screen wires (2) or closest to the ends of the screen wires (2), and a shrink fit is formed between the end ring (5) and the support rod (3), in which a substantially perpendicular force to the axis of the screen cylinder (1) acts between the end ring (5) and support rod (3), and the force, through the support rod (3), locks the screen surface formed by the screen wires (2) substantially immobile in relation to the end ring (5).

5. A method as claimed in claim 4, **characterized** in that the support rods (3) are bent in the shape of a ring so that the screen wires (2) remain on side of the inner circumference of the support rods (3) forming a cylindrical screen surface in the axial direction of the screen cylinder (1), and that the inner circumference (6) or a part (6') of the inner circumference (6) of the end ring (5) is arranged to at least one support rod (3) at the ends of the screen wires (2) or closest to the ends of the screen wires (2) outside the support rod (3), and a shrink fit is formed between the end ring (5) and support rod (3), in which a substantially perpendicular force to the axis of the screen cylinder (1) acts between the end ring (5) and support rod (3), and the force is directed from the direction of the support rod (3) to the direction of the end ring (5) and/or from the direction of the end ring (5) to the direction of the support rod (3), and the force, through the support rod (3), locks the screen surface formed by the screen wires (2) substantially immobile in relation to the end ring (5).

6. A method as claimed in claim 4, **characterized** in that the support rods (3) are bent in the shape of a ring so that the screen wires (2)

remain on the side of the outer circumference of the support rods (3) forming a cylindrical screen surface in the axial direction of the screen cylinder (1), and that the outer circumference (8) or a part (8') of the outer circumference (8) of the end ring (5) is arranged to at least one support rod (3) at the ends of the screen wires (2) or closest to the ends of the screen wires (2) inside the support rod (3), and a shrink fit is formed between the end ring (5) and support rod (3), in which a substantially perpendicular force to the axis of the screen cylinder (1) acts between the end ring (5) and support rod (3), and the force is directed from the direction of the support rod (3) to the direction of the end ring (5), and the force, through the support rod (3), locks the screen surface formed by the screen wires (2) substantially immobile in relation to the end ring (5).

7. A method as claimed in claim 2 or 5, **characterized** in that the shrink fit is made by

expanding the structure of the end ring (5) and/or by pressing the structure of the screen cylinder (1) together in the radial direction of the screen cylinder (1),

mounting the end ring (5) at the end of the screen cylinder (1) in such a manner that the inner circumference (6) or a part (6') of the inner circumference (6) of the end ring (5) surrounds at least one support rod (3) at the ends of the screen wires (2) or closest to the ends of the screen wires (2), and

returning the structure of the end ring (5) to substantially normal and/or returning the structure of the screen cylinder (1) in the radial direction of the screen cylinder (1) to substantially normal.

8. A method as claimed in claim 7, **characterized** by expanding the structure of the end ring (5) by heating the end ring (5), whereby the structure of the end ring (5) expands due to the heat, and returning the structure of the end ring (5) to substantially normal by cooling the end ring (5) or by letting the end ring (5) cool, whereby the structure of the end ring (5) returns to substantially normal.

9. A method as claimed in claim 3 or 6, **characterized** by making the shrink fit by

expanding the structure of the screen cylinder (1) in the radial direction of the screen cylinder (1),

mounting the end ring (5) at the end of the screen cylinder (1) in such a manner that the outer circumference (8) or a part (8') of the outer cir-

cumference (8) of the end ring (5) surrounds at least one support rod (3) at the ends of the screen wires (2) or closest to the ends of the screen wires (2), and

returning the structure of the screen cylinder (1) to substantially normal in the radial direction of the screen cylinder (1).

10. A method as claimed in any one of the preceding claims, **characterized** by creating one or more holes extending in the radial direction of the screen cylinder (1) through the end ring (5) to the support rod (3) and arranging into the hole a locking element (9) for fastening the end ring (5) and support rod (3) together.

11. A method as claimed in any one of the preceding claims, **characterized** by making a weld joint (10) between the end ring (5) and support rod (3) along at least part of the length of the joint between the end ring (5) and support rod (3) to fasten the end ring (5) and support rod (3) to each other.

12. A screen cylinder (1) for cleaning or screening fibre pulp, the screen cylinder (1) having screen wires (2) in the axial direction of the screen cylinder (1) set at predefined intervals to form a cylindrical screen surface and fastened to ring-shaped support rods (3), and the screen cylinder (1) ends having end rings (5) arranged thereto, **characterized** in that at least one end ring (5) is installed at one end of the screen cylinder (1) in such a manner that the end ring (5) is arranged to at least one support rod (3) at the ends of the screen wires (2) or closest to the ends of the screen wires (2) without fastening the end ring (5) to the screen wires (2) and that there is a shrink fit between the end ring (5) and support rod (3), in which a substantially perpendicular force to the axis of the screen cylinder (1) is arranged to act between the end ring (5) and support rod (3), and the force, through the support rod (3), locks the screen surface formed by the screen wires (2) substantially immobile in relation to the end ring (5).

13. A screen cylinder as claimed in claim 12, **characterized** in that the screen wires (2) forming the screen surface are fastened inside the ring-shaped support rods (3) and the inner circumference (6) or a part (6') of the inner circumference of the end ring (5) is arranged to at least one support rod (3) at the ends of the screen wires (2) or closest to the ends of the screen wires (2) in such a manner that there is a shrink fit between the end ring (5) and support rod (3), in which a substantially perpendicular force to the axis of the screen cylinder (1) is arranged to act between the end ring (5) and support

rod (3), which force is directed from the direction of the support rod (3) to the direction of the end ring (5) and/or from the direction of the end ring (5) to the direction of the support rod (3), and which force, through the support rod (3), locks the screen surface formed by the screen wires (2) substantially immobile in relation to the end ring (5).

14. A screen cylinder as claimed in claim 12, **characterized** in that the screen wires (2) forming the screen surface are fastened to ring-shaped support rods (3) outside thereof and that the outer circumference (8) or a part (8') of the outer circumference (8) of the end ring (5) is arranged to at least one support rod (3) at the ends of the screen wires (2) or closest to the ends of the screen wires (2) in such a manner that there is a shrink fit between the end ring (5) and support rod (3), in which a substantially perpendicular force to the axis of the screen cylinder (1) is arranged to act between the end ring (5) and support rod (3), which force is directed from the direction of the support rod (3) to the direction of the end ring (5), and which force, through the support rod (3), locks the screen surface formed by the screen wires (2) substantially immobile in relation to the end ring (5).

15. A screen cylinder as claimed in any one of claims 12 to 14, **characterized** in that the end ring (5) has in the radial direction of the screen cylinder (1) one or more holes extending through the end ring (5) to the support rod (3), and that a locking element (9) for fastening the end ring (5) and support rod (3) together is arranged in the hole.

16. A screen cylinder as claimed in any one of claims 12 to 14, **characterized** in that one or more weld joints (10) are formed between the end ring (5) and support rod (3) on at least part of the length of the joint between the end ring (5) and support rod (3) for the purpose of fastening the end ring (5) and the support rod (3) together.